

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Kowert on 1/15/2008.

The application has been amended as follows:

1. (Currently amended) A peer-to-peer network system, comprising:
  - a plurality of peers, wherein each peer comprises a network node configured to communicate with one or more other ones of said peers over one or more networks;
  - a plurality of peer services or content provided by one or more of said peers;
  - a service or content advertisement for each of said services or content, wherein each service or content advertisement comprises an identification of a corresponding service or content and an indication of how to access the corresponding service or content;
  - a peer advertisement for each of said peers, wherein each peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein

one or more of said peer advertisements further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

wherein one or more of said peers are configured to publish their corresponding peer advertisements and one or more of said service or content advertisements in the peer-to-peer network system to be discoverable by other peers; and

wherein each advertisement is a separate programming language independent metadata document.

Claims 11-12 (Cancelled).

25. (Currently amended) A peer node, comprising:

a processor;

a port operable to couple the peer node to a network; and

a memory operable to store program instructions, wherein the program instructions are executable by the processor to:

discover advertisements for resources in a peer-to-peer network, wherein each resource advertisement comprises an identification of a

corresponding resource and an indication of how to access the corresponding resource, wherein one or more other peer nodes publish the advertisements on the peer-to-peer network; and access said resources corresponding to said advertisements as indicated in said advertisements;

wherein said resources include other peer nodes in the peer-to-peer network and services or content provided by the other peer nodes in the peer-to-peer network, and wherein said advertisements include peer advertisements corresponding to the other peer nodes and service or content advertisements corresponding to said services or content; wherein each peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein one or more of said peer advertisements further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement

wherein each advertisement is a programming language independent metadata document.

26. (Currently amended) The peer node as recited in claim 25, wherein said resources further include one or more of peer groups, ~~content~~, service classes, ~~services~~, pipes, and pipe endpoints.

32. (Currently amended) The peer node as recited in claim 25, ~~wherein the resources include services;~~ wherein the program instructions are further executable to access a service upon receiving said service's corresponding service advertisement.

37. (Currently amended) The peer node as recited in claim 25, ~~wherein the resources include services;~~ wherein[[,]] the peer node is implemented on a computing platform and wherein a particular service of the one or more discovered services is implemented on a different computing platform from the computing platform, wherein the service advertisement for the particular service specifies a platform-independent method for accessing the particular service to activate the particular service.

39. (Currently amended) A peer node, comprising:

a processor;

a port operable to couple the peer node to a network;

a memory operable to store program instructions, wherein the program

instructions are executable by the processor to:

instantiate one or more services;

generate a peer advertisement for the peer node, wherein said peer

advertisement for the peer node comprises:

an identifier for the peer node;

a pipe endpoint advertisement indicating where to send messages  
to the peer node; and

one or more service advertisements, wherein each service  
advertisement corresponds to one of the one or more  
services instantiated on the peer node, and wherein each  
service advertisement indicates a mechanism for other peer  
nodes on the network to access the corresponding service;  
and

publish the peer advertisement on the network, wherein said publishing  
the peer advertisement makes the peer advertisement, the pipe endpoint  
advertisement, and the one or more service advertisements available for  
discovery by other peer nodes in the network.

48. (Currently amended) The peer node as recited in claim 41, wherein, ~~in said~~  
~~publishing~~ to publish the peer advertisement on the network, the program instructions  
are further executable to send the peer advertisement to one or more other peer nodes  
on the network.

49. (Currently amended) The peer node as recited in claim 41, wherein, ~~in said~~  
~~publishing~~ to publish the peer advertisement on the network, the program instructions  
are further executable to send the peer advertisement to one or more rendezvous

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peers on the network, wherein the one or more rendezvous peers are configured to cache advertisements for discovery on the network.

57. (Currently amended) A method, comprising:

generating a peer advertisement for a peer in a peer-to-peer network, wherein the peer advertisement comprises an identifier for the peer and a communication address for the peer; wherein said peer advertisement further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

generating a service advertisement for each of one or more of services provided by the peer, wherein each service advertisement comprises an identifier for the corresponding service and an indication of how to access the corresponding service;

generating a content advertisement for each of one or more of contents provided by the peer, wherein each content advertisement comprises an identifier for the corresponding content and an indication of how to access the corresponding content; and

publishing the peer advertisement and one or more of said service advertisements or said content advertisements in the peer-to-peer network to be

discoverable by other peers, wherein the peer advertisement includes an indication of a service or a content provided by the peer.

79. (Currently amended) A method for discovering resources in a peer-to-peer network, the method comprising:

a peer node broadcasting a discovery query message specifying a type of resource on the network; and

the peer node receiving [[one or more]] advertisements for the specified type of resource in response to said discovery query message, wherein advertisements include a peer advertisement and a content or service advertisement, wherein one or more other peer nodes publish the peer and content or service advertisements on the peer-to-peer network;

wherein the service or content advertisement comprises an identification of a corresponding service or content and an indication of how to access the corresponding service or content;

wherein the peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein one or more of said peer advertisements further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

wherein each advertisement is a programming language independent metadata document formatted in accordance with a peer-to-peer protocol.

88. (Currently amended) The method as recited in claim 79, wherein the resources are services, wherein one of the one or more advertisements includes a service class advertisement, wherein said service class advertisement comprises one or more service implementation advertisements, wherein each service implementation advertisement describes a different service implementation specific to a different computing platform.

94. (Currently Amended) A method, comprising:

a peer node on a network instantiating one or more services;

the peer node generating a peer advertisement for the peer node, a service advertisement for each of the one or more services instantiated on the peer node, and a content advertisement for each of one or more of contents provided by the peer node in accordance with a peer-to-peer platform discovery protocol, wherein the peer advertisement includes an indication of at least one service instantiated by the peer; and

wherein the service advertisement comprises an identification of a corresponding service and an indication of how to access the corresponding service;  
wherein the content advertisement comprises an identification of a corresponding content and an indication of how to access the corresponding content;



wherein the peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein said peer advertisement further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

the peer node publishing the peer advertisement and one or more of the service advertisement or content advertisements in the peer-to-peer network for discovery by other peer nodes on the network, wherein the ~~peer~~ advertisements are ~~[[is a]]~~ programming language independent metadata documents formatted in accordance with the peer-to-peer platform discovery protocol.

95. (Currently amended) The method as recited in claim 94, further comprising:

the peer node including an identifier for the peer node in the peer advertisement;

the peer node including a pipe endpoint advertisement indicating where to send messages to the peer node in the peer advertisement; and

the peer node including one or more of the service advertisements in the peer advertisement, wherein each service advertisement corresponds to one of the one or more services instantiated on the peer node, and wherein each service advertisement includes information indicating a mechanism for other peers on the network to access the corresponding service~~[[; and]]~~.

100. (Currently amended) An article of manufacture comprising program instructions, wherein the program instructions are computer-executable to implement:

generating a peer advertisement for a peer in a peer-to-peer network, wherein the peer advertisement comprises an identifier for the peer and a communication address for the peer; wherein said peer advertisement further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

generating a service advertisement for each of one or more of services provided by the peer, wherein each service advertisement comprises an identifier for the corresponding service and an indication of how to access the corresponding service;

generating a content advertisement for each of one or more of content provided by the peer, wherein each content advertisement comprises an identifier for the corresponding content and an indication of how to access the corresponding content; and

publishing the peer advertisement and one or more of said service advertisements or said content advertisements in the peer-to-peer network to be discoverable by other peers, wherein the peer advertisement includes an indication of a service or a content provided by the peer.

Claims 104-105 (Cancelled).

110. (Currently amended) A computer-readable storage medium configured to store program instructions, wherein the program instructions are computer-executable to implement:

a peer node broadcasting a discovery query message specifying a type of resource on the network; and

the peer node receiving [[one or more]] advertisements for the specified type of resource in response to said discovery query message, wherein the advertisements include a peer advertisement, a content or service advertisement, wherein one or more other peer nodes publish the peer and content or service advertisements on the peer-to-peer network;

wherein the content or service advertisement comprises an identification of a corresponding content or service and an indication of how to access the corresponding content or service;

wherein the peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein one or more of said peer advertisements further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

wherein each advertisement is a programming language independent metadata document formatted in accordance with a peer-to-peer protocol.

111. (Currently amended) A computer-readable storage medium configured to store program instructions, wherein the program instructions are computer-executable to implement:

a peer node on a network instantiating one or more services;

the peer node generating a peer advertisement for the peer node, a service advertisement for each of the one or more services instantiated on the peer node, and a content advertisement for each of one or more of contents provided by the peer node in accordance with a peer-to-peer platform discovery protocol, wherein the peer an advertisement includes indication of at least one service instantiated by the peer; and

wherein the service advertisement comprises an identification of a corresponding service and an indication of how to access the corresponding service;

wherein the content advertisement comprises an identification of a corresponding content and an indication of how to access the corresponding content;

wherein the peer advertisement comprises an identification of a corresponding one of said peers and communication address for the corresponding one of said peers, wherein one or more of said peer advertisements further comprises an indication of a service or a content provided by the peer corresponding to that peer advertisement;

the peer node publishing the peer advertisement and one or more of the service or content advertisements in the peer-to-peer network for discovery by other peer nodes on the network, wherein the ~~peer~~ advertisements are [[is

a]] programming language independent metadata documents formatted in accordance with the peer-to-peer platform discovery protocol.

### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

Claims 1,4-10,13-50,52-103,106-111 are allowable over the prior art of record.

This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the board decision rendered on 8/31/2007 and the substance of applicant's remarks in the Amendment filed on 6/24/2008, 12/18/2008 with respect to the amended claim limitations point out the reason claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUYEN DOAN whose telephone number is (571)272-4226. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571 272 3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. D./  
Examiner, Art Unit 2452

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